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that the fundamental postulates regarding the origin and function of biogenic stimulants in the organism have been fully justified by clinical and experimental results.

In regard to the early diagnosis of glaucoma and the evaluation of the effectiveness of treatment of this disease, the "elastotonometric" method of Filatov and Professor S. F. Kal'f, which involves daily measurement of the intraocular pressure, has proven to be of considerable advantage, according to reports presented at the meeting. In these reports, considerable value was attached to Kal'f's theory of the pathogenesis of glaucoma. This theory assumes that the nervous system plays a fundamental role in the development of this disease. Kal'f was present at the meeting and presented a report.(1)

Approximately 2 months earlier, Dr G. Rumyantsev reviewed the contemporary status of tissue therapy in an article published in Meditsinskiy Rabotnik. The main points of Rumyantsev's article are given below:

While tissue therapy had already been attempted in Russia in 1895 at the Obuckov Hospital in Petersburg (cf. Bol'nichnaya Gazeta Botkina, No 41-45, 1895), the method received complete recognition and began to be applied widely only during the Stalin period. The method as proposed originally by Filatov in 1933 and completely developed by him in 1936 is based on the fact that when tissue removed from the organism is preserved under conditions which, although unfavorable, still enable the tissue to survive, it undergoes a biological process of rebuilding that involves the formation of biogenic stimulants. When these stimulants are introduced, together with the tissue, into the patient's body, they strengthen the tissues of the patient's body, induce their regeneration, and bring about recovery.

This method has been applied in the treatment of war wounds which did not heal readily (by Goligovskiy and Antelava), trophic ulcers (by Il'enkov, Semenov, and Tarasenko), gastric and duodenal ulcers (by Semenov and Krause), infiltrates and scars which interfere with the mobility of joints (by Krause, Medvedev, and Blokhin), spontaneous gangrene (by Bakall, Lerkov, Gundarev, and Aleksandrovich), several forms of surgical tuberculosis, and various other conditions.

Rumyantsev applied tissue therapy on 3,000 patients at Rostov-on-the-Don and reports that the method has been accepted at six hospitals and 15 polyclinics in that city and the general area of Rostov. The majority of the 3,000 patients were cases of gastric and duodenal ulcer, bronchial asthma of lumboschioradiculites, and sufferers from female diseases. In connection with the clinical work in question, improved methods of preparing therapeutically effective heterogeneous tissues (by "feeding") were developed. Definite tissues have a specific effect in diseases and some may even be harmful. Thus, the tissue of sex glands has a beneficial effect in cases of red lupus, while spleen tissue is harmful.

Spleen tissue, on the other hand, stimulates the resorption of scars and infiltrates, interfering with the mobility of joints. In 75% of cases, tissue of the suprarenals has a beneficial effect on bronchial asthma. Sex gland tissue, quite generally, helps in diseases of the circulatory system and skin diseases. Some of the best results (65.2% of improvement and recovery) were obtained in cases of gastric ulcer. Gastric and duodenal ulcers were treated by several successive implantations of tissue. A type of ulcer which heals with great difficulty is treated by a combined implantation of three types of tissue: spleen, sexual glands (which stimulate the circulatory system), and suprarenals (which stimulate the vegetative nervous system). Tissue therapy has also been applied successfully in the treatment of endarteritis obliterans.

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In connection with the wide introduction of the new therapeutic method in Rostov, physicians had to be newly trained. Novel standard methods for the preservation of tissue and for the delivery of preserved tissue to hospitals and clinics were developed. Experience has shown that a high degree of density achieved in the autoclaving of tissue is advantageous and leads to a better therapeutic result. The treatment with preserved tissues obtained from healthy animals is simple and safe. The surgery required for the implantation of tissue is so simple that it can even be successfully applied under ambulatory conditions. Clinical observations made in Rostov have led to the conclusion that the biogenic stimulants of preserved tissue act primarily on the nervous system and, via the nervous system, on the organism affected by the disease.(2)

In the 10 August 1950, issue of Meditinskiy Rabotnik, two physicians who had had experience in the field of tissue therapy, K. Rezhabek of Rostov-on-the-Don and O. Chernetskiy of Belaya Kalitva, commented on the article published by Rumyantsev. In addition to the diseases mentioned by Rumyantsev, Rezhabek refers to pyorrhea, gastritis, hypertension, and brucellosis as having been treated by surgical tissue implantation. He describes occasional pus formation which results in elimination of the implanted tissue in a liquefied conditions subsequently to healing of the wound and removal of the suture. This complication, in Rezhabek's opinion, must have been due to the fact that the introduced tissue was not entirely sterile even after autoclaving.

A subsequent investigation disclosed that *B. subtilis* could actually be cultivated in a sugar broth from freshly autoclaved spleen tissue. All other tissues tested were found to be sterile, however. Rezhabek also mentions hemorrhages and hematoma which occur when a large blood vessel in the cellular tissue is injured during the incision of a pocket for the implantation. He states that hematoma do not interfere with the resorption of implanted tissue and cites a case of traumatic arthritis which had been successfully treated by tissue implantation. Rezhabek also points out that in some cases the implantation does not "take" due to idiosyncrasy and that the specificity is not always in accordance with the rules indicated by Rumyantsev. As an example, he cites a case of eczema which was successfully treated with spleen tissue alone. In this case [that of a female patient] the addition of testicle tissue led to no improvement.

Chernetskiy states that the use of condensed pieces of tissue does not always lead to the desired result, while the introduction of a concentrated emulsion of the same tissue is often rapidly effective. He notes that Rumyantsev recommends dense tissue, but Filatov prefers the use of tissue extracts. According to Chernetskiy's method, the tissue, on preservation and autoclaving, is triturated in a mortar together with the liquid exuded during the process of autoclaving. An equal volume of a 1% novocain solution is added and the mixture is filtered. To the emulsion prepared in this manner (the filtrate), 200,000-300,000 international units of penicillin are added. Six to eight cubic centimeters of the emulsion are injected into the subcutaneous cellular tissue of the front abdominal wall.

To show that the use of the emulsion is preferable, Chernetskiy cites specific case histories of gastric ulcer and bronchial asthma. In conclusion, Chernetskiy refers to research on the best methods of tissue preservation at low temperatures and in various solutions.(3)

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SOURCES

1. Meditsinskiy Rabotnik, 5 Oct 50; "Jubilee Scientific Meeting of the Institute imeni V. P. Filatov," Cand Med Sci I. Ershkovich and Sci Collab A. Shevalev (Odessa)
2. Meditsinskiy Rabotnik, 13 Jul 50, p 3; "New Developments in the Field of Tissue Therapy," G. Rumyantsev
3. Meditsinskiy Rabotnik, 10 Aug 50, p 3; "From Medical Practice: Improved Methods of Tissue Therapy," Communications to the Editor

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